

FIG. 1
Challenge dose 10^8 CFU

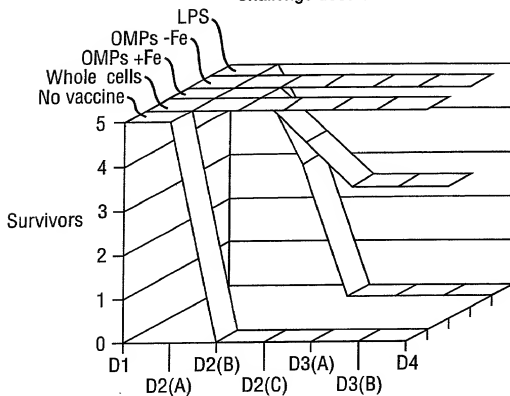
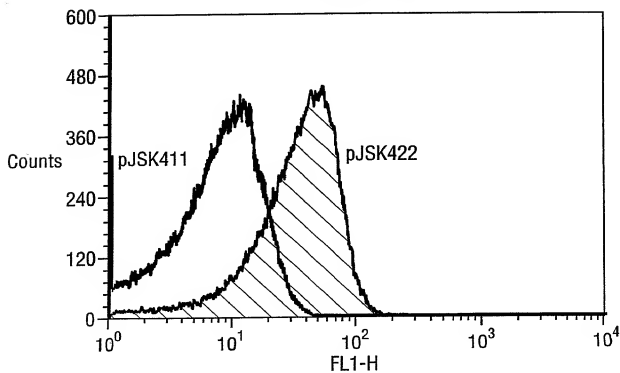


FIG. 6



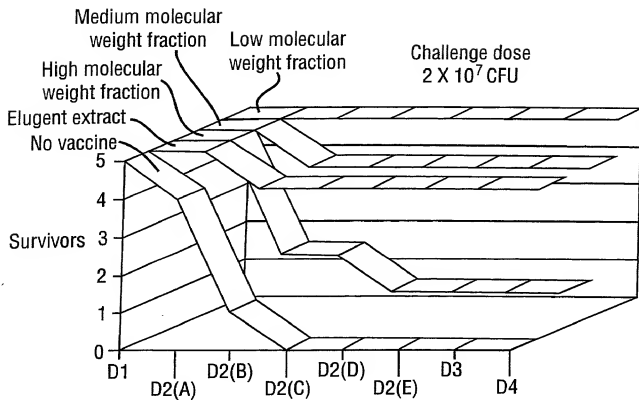


FIG. 2A

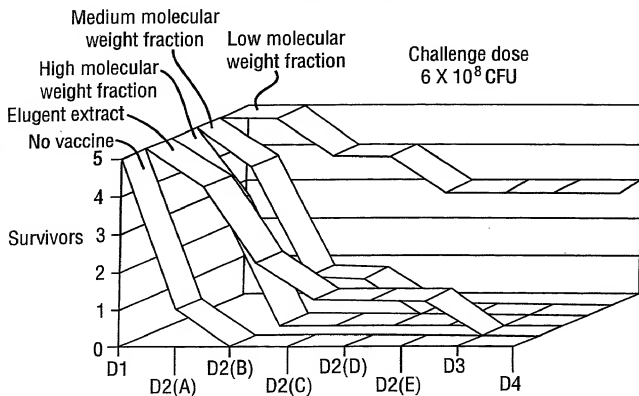
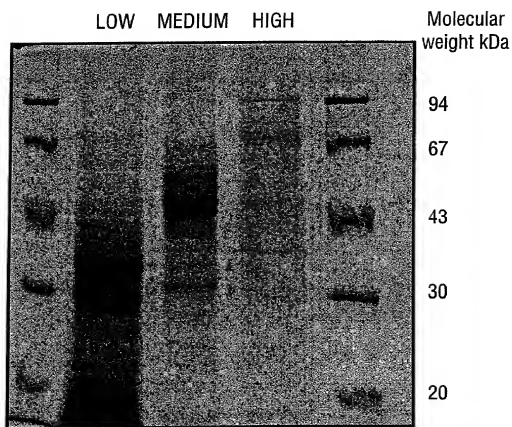


FIG. 2B



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FIG. 3

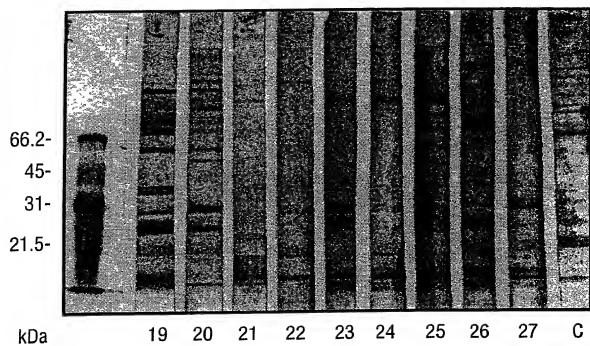
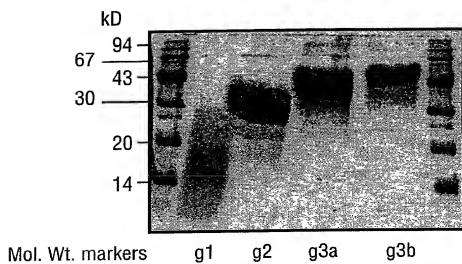


FIG. 4



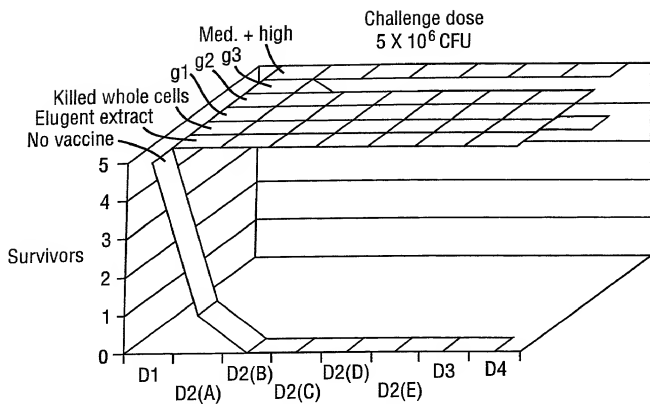


FIG. 5

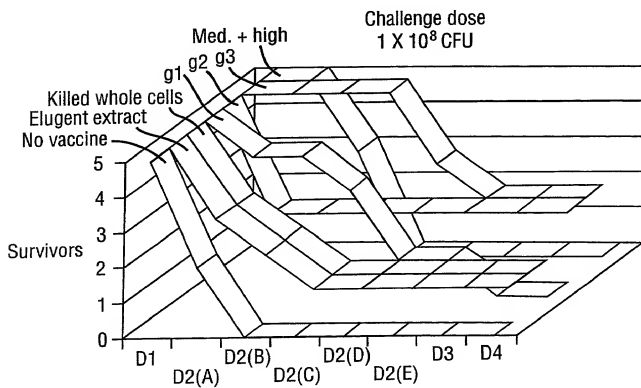


Fig. 7

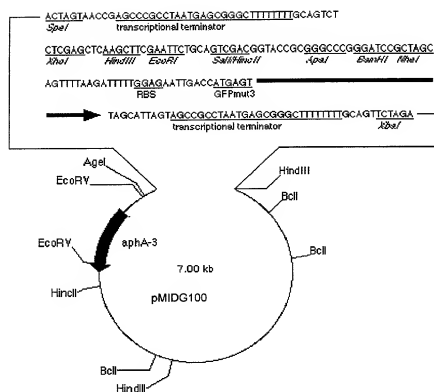
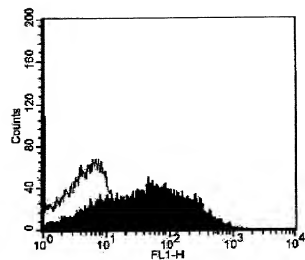


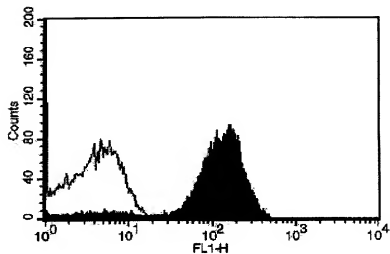
Fig. 8

(A)



Key	Name	Parameter	Gate
—	<i>N. cinerea</i> NRL32165 pMIDG100	FL1-H	G1
■	<i>N. cinerea</i> NRL32165 pMIDG101	FL1-H	G1

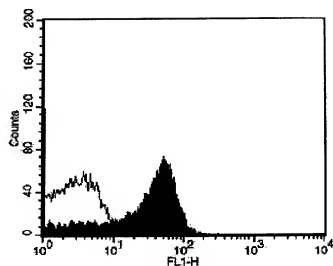
(B)



Key	Name	Parameter	Gate
—	<i>N. flava</i> NRL30008 pMIDG100	FL1-H	G1
■	<i>N. flava</i> NRL30008 pMIDG101	FL1-H	G1

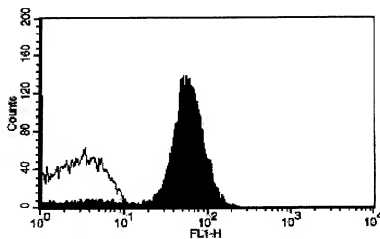
Fig. 8 (continued)

(C)



Key	Name	Parameter	Gate
—	N. siroica M98-252234 pMIDG100	FL1-H	G1
■	N. siroica M98-252234 pMIDG101	FL1-H	G1

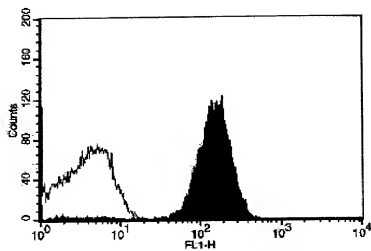
(D)



Key	Name	Parameter	Gate
—	N. subflava NRL30017 pMIDG100	FL1-H	G1
■	N. subflava NRL30017 pMIDG101	FL1-H	G1

Fig. 8 (continued)

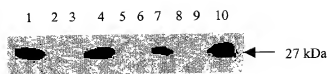
(E)



Key	Name	Parameter	Gate
—	N. flavesceans 2830 pMIDG100	FL1-H	G1
■	N. flavesceans 2830 pMIDG101	FL1-H	G1

Fig. 9

(A)



(B)

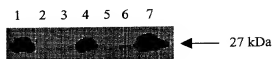
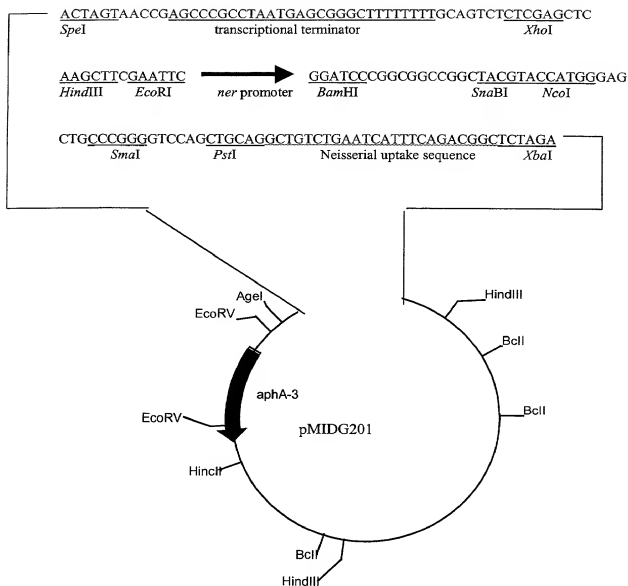


Fig. 10

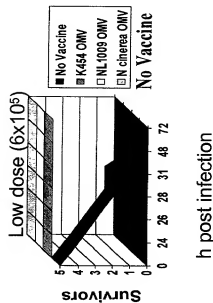


[illegible]

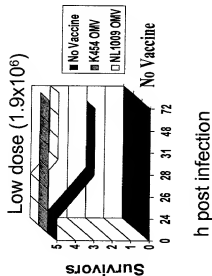
RBS Start codon
 ggtccaaagccgatgccgcacacgcgaaaagccctcaagctctttaggtcttcacaaagcttcagccgcgcacctctcgcagctctacccgatcaaacgacctctcgcttcgcggt
 ggtttacacgcgcgtacacaaactataaagcccatcaaccattttcaaaattttagcagatccggccgcgtccgcgtatttaccgacttcgacacccaatgcccgctaaacgtattct
 ggcgcgcgcgttagcgcctcaaccgcgcctctgcgtacttgcgcgcgcgcgcacgcacgttcacaaaccttccatcgccctcggcgtatttagcggcggtatgaatgatgcgtta
 ccggcaatgtcgtattttgatgccgcgtctacgtactcaactatcatcgcgaagtcaacatgttcaaaaacgtctgcgtccgcgaactgtctgcgcgtcgcgtcattcttga
 tatcgccctt atttcgcaaacccgcgcgccttcggcgctttttttctt - *Pst*I
 Stop codon Transcription terminator

Fig. 12 *N. lactamica* OMVs protect mice against challenge by diverse meningococcal strains

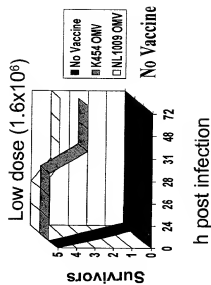
K454 B15:P1.7,16 (ET5)



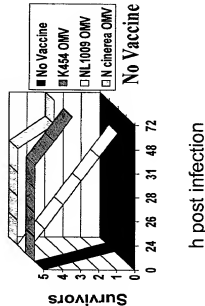
Z4673 B (Lineage 3)



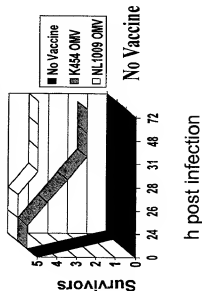
Z8948 C2a:P1.5,2 (ET37)



High dose (5.7×10^9)



High dose (2.7×10^7)



High dose (2.3×10^6)

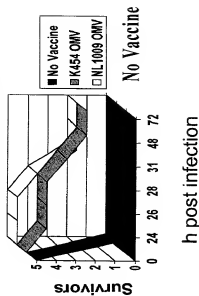


Fig 12 continued

NZ 394/98 B4:P1.6 (Lineage 3)

Z4662 B2b:P1.2 (A4)

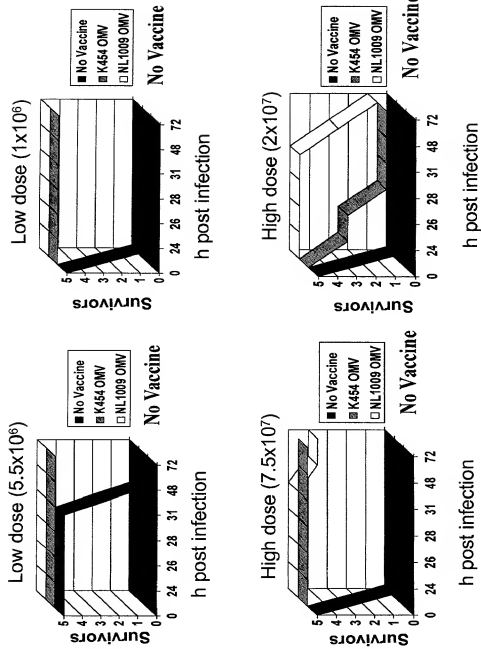


Fig. 13 *Neisseria lactamica* OMVs and low MW protein pool protect mice against meningococcal challenge

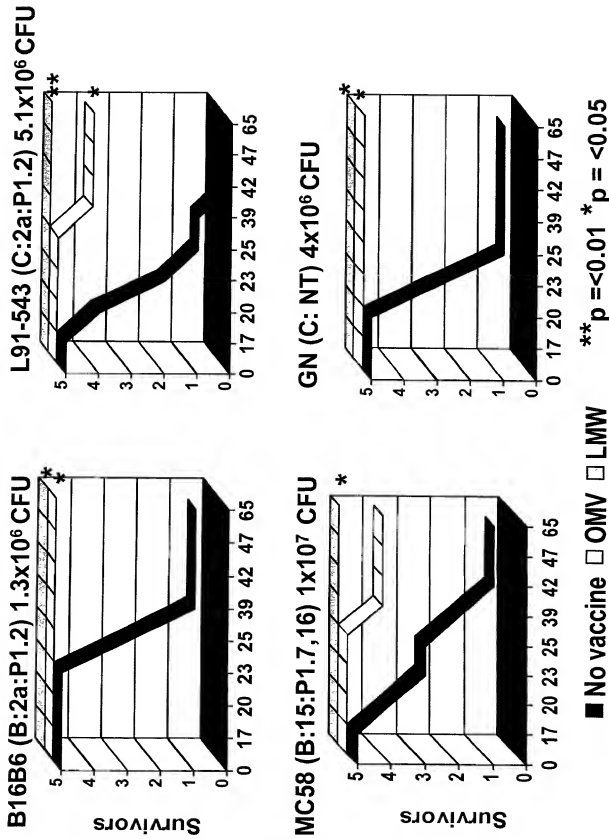
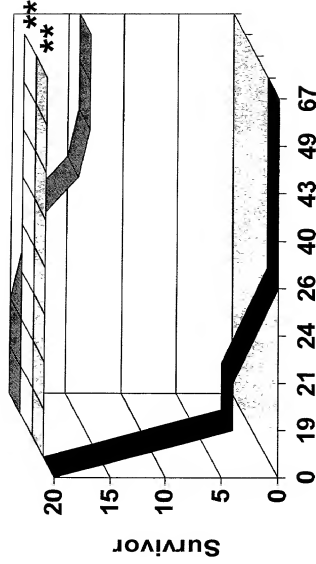


Fig. 14. *N. lactamica* OMVs with Freund's or alum adjuvant protect mice against serogroup B meningococcal challenge (isolate K454)

Challenge dose 4.35×10^6 CFU



Hours post challenge

■ No vaccine
 □ OMV Freund's
 ■ LMW ALOH

** $p < 0.001$